OTIS MOUNTAIN ECOSYSTEM RESTORATION PROJECT

ENVIRONMENTAL ASSESSMENT

OR-025-99-50

BURNS DISTRICT OFFICE
BURNS, OREGON

MARCH 2000

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EA OR-025-99-50

I. INTRODUCTION

A. Location and Background Information

The proposed project area is located in the vicinity of Otis Mountain which is approximately 50 miles east of Burns, Oregon, and approximately 10 miles north of the town of Drewsey, Oregon. The project site is within Harney County, Oregon.

One of the most pronounced vegetation changes in recent time has occurred in juniper and pinyon-juniper woodlands throughout the west. Western juniper, the northwest representative of the pinyon-juniper zone in the Intermountain Region (Franklin and Dryness, 1973), has greatly increased in density during the past 100 years (Miller and Wigand, 1994). The most recent estimate of land area occupied by western juniper woodlands is approximately 4 million acres with about 2.3 million acres located in Oregon and 1.2 million acres in northeastern California (Eddleman, et al., 1994). In the Otis Mountain project area, western juniper densities were probably low prior to the late 1800's. Trees were restricted to rocky outcrops which produce little fine fuel capable of producing fire intensities high enough to kill trees. Invasion of western juniper began in the late 1800's following the introduction of domestic livestock to the west and has rapidly accelerated through the 20th century (Burkhardt and Tisdill, 1989; Miller and Wigand, 1994; West et al., 1998). Fire suppression has also played a major role in influencing the expansion of western juniper (Miller and Rose, 1999). This increase in juniper density and canopy cover has resulted in reduced density of many plant species and loss of habitat diversity.

Ponderosa pine also exists within the fire-dependent communities in the Otis Mountain project area. Some areas currently support an excess of young age class ponderosa pine necessary to maintain a healthy stand. However, young age class ponderosa pine trees are slowly moving into areas that did not support the species prior to the establishment of aggressive fire suppression policies.

Historically, the ecosystems of the Otis Mountain project area evolved under periodic natural burns. Ponderosa pine, and to a greater extent, western juniper have encroached into much of the mid and upper elevations of the Otis Mountain project area. This encroachment is due to alterations in the historic fire frequency, past grazing practices, and possible changes in climate. Past fire management practices have resulted in the advancement of ponderosa pine and western juniper into nearby plant communities where they previously did not exist or were a lesser component of the vegetation community. Quaking aspen stands are of particular concern within the project area. Conifers are encroaching into these stands and crowding out the aspen. This is occurring through much of the Blue Mountains. Loss of this habitat would affect numerous neotropical bird species and many small mammals and insects that utilize these habitats.

B. Conformance with the Land Use Plan

The projects proposed in this Environmental Assessment (EA) are in conformance with the Three Rivers Resource Management Plan/Environmental Impact Statement (RMP/EIS) of 1992. The Three Rivers RMP, Record of Decision (ROD), and Rangeland Program Summary (RPS) identified prescribed burning and juniper burning as potential range improvements within the project area (refer to Three Rivers RMP/ROD/RPS approved in 1992).

C. Purpose and Need

The purpose of the proposed project is to reduce the advancement of western juniper and ponderosa pine into adjacent plant communities. Ponderosa pine and western juniper have encroached into much of the mid and upper elevations in the Birch Creek, Bluebucket Creek, Otis Creek, and Squaw Creek watersheds. As these trees increase in size and density, other plants and plant communities such as (but not limited to) aspen, mountain mahogany, antelope bitterbrush, mountain big sagebrush, snowberry, serviceberry, Idaho fescue, bluebunch wheatgrass, Thurber needlegrass, various lupines, and Indian paintbrush have been reduced in density and vigor.

This decrease in plant diversity, density, and cover makes the community more susceptible to invasion by noxious weeds, erosion from raindrop impacts, and overland flow. Quality of wildlife habitat is also reduced by the decrease in plant diversity, density, and cover. The overall result is a decline in watershed function.

The loss of plant diversity has decreased available forage and habitat for many wildlife species including deer, elk, and a variety of small mammals and birds. Sage grouse are believed to use the project area during the summer months.

Increases in tree density and cover can adversely affect sage grouse populations (Commons and others, 1999) found that sage grouse use decreased in areas where pinyon and juniper provided perching sites for raptors. As tree densities increase, the amount of forage available for domestic livestock and wildlife decreases. Further delay in reducing western juniper and ponderosa pine encroachment will result in additional losses in the aspen, mountain mahogany, and sagebrush plant communities.

II. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVES

A. Proposed Action - Burning and Cutting

The proposed action is to reduce western juniper and ponderosa pine encroachment through the reintroduction of fire and mechanical cutting methods such as chain saws over the next 5 to 15 years (refer to the attached Vicinity Map and Unit Map for location and layout of the proposed project).

Fire would be reintroduced on approximately 3,300 acres within the Otis Mountain project area over the life of the project. Individual burn units would range from 240 to 1,500 acres in size. The objective of burning would be to cause mortality of 75 to 95 percent of the western juniper and ponderosa pine trees less than 10 feet in height and to cause mortality of 50 to 80 percent of trees greater than 10 feet in height while at the same time reintroducing fire under a controlled manner into fire-dependent mountain big sagebrush sites. Burn areas would be designed to create a mosaic pattern of burned and unburned areas across the project area.

In order to ensure that sage grouse are not displaced from their remaining habitat within the project area, sites that are no longer attractive to the birds because of tree density or height will be targeted for burning first. Areas still used by the birds will be burned later in the project life after the first areas burned recover and become attractive to the sage grouse once again.

Burning would take place in the early fall following one growing season of rest from livestock grazing to allow fine fuels to accumulate. Control line preparation would probably occur during the spring or early fall prior to the actual burning of individual units. Burn units would be rested from livestock grazing for two growing seasons following the actual burning to allow the vegetation to naturally reestablish and gain vigor.

In units where inadequate ground fuels are present to carry a fire sufficient to meet resource objectives, due to the advanced size and density of the western juniper, mechanical treatment (cutting) of individual trees would be the preferred treatment over burning. Cutting would also be used in areas where removal of trees would be advantageous to extending the available habitat used by sage grouse. These cutting areas may be included into a future burn area later into the life of the plan.

Some of the proposed burn areas have natural (topography and sparse vegetation) or preexisting humanmade road barriers, which would require minimum fire control. Other areas may require control lines to be established prior to burning the individual units. In areas that require control lines to be established, techniques such as burning strips of vegetation or use of heavy machinery to remove vegetation to establish lines will be used. In the event that the prescribed burn escapes the targeted area within sage grouse habitat or ponderosa pine stands, immediate suppression action will be taken. Burns that escape into juniper-dominated plant communities may be permitted to burn to the nearest road or other control barrier. All sites would be rested from livestock grazing preceding the burn to facilitate fine fuel growth. The proposed fire reintroduction areas would also require two growing seasons of rest from livestock grazing following burning. There is a small percentage of private land within the proposed treatment area. To achieve management objectives, private land may be burned in conjunction with public land through a cooperative agreement.

Four cutting units totaling approximately 1,500 acres have been identified within the project area. Individual cutting units would vary in size from approximately 160 to 700 acres in size. In sagebrush dominated areas designated for cutting, all junipers less than 24 inches at 12-inch stump height would be cut and all ponderosa pine less than 10 inches diameter at breast height (dbh) would be cut. Cutting of trees would be accomplished with chain saws.

All western juniper trees in aspen and mountain mahogany stands will be cut.

Fenced exclosures may be constructed around aspen or mountain mahogany stands if a need for protection from livestock and wildlife is identified. These fences will be constructed following actual burning or cutting and will remain in place until the vegetation has recovered enough to warrant their removal (normally 5 years).

Burned areas will be monitored for invasive nonnative weeds for 3 years following actual burning.

B. Description of the Alternatives

1. Alternative A - Cutting Only

This alternative would use mechanical means only (i.e., chain saws) to cut western juniper and ponderosa pine targeted for removal from approximately 4,800 acres within the project area. This alternative is a labor intensive means of removing undesirable species from plant communities.

Western juniper and ponderosa pine would be individually cut from aspen, mountain mahogany, and mountain big sagebrush communities. All western juniper would be cut and all ponderosa pine less than 10 feet in height would be cut from aspen and mountain mahogany sites. All western juniper less than 24 inches in diameter and all ponderosa pine less than 10 feet in height would be cut from mountain big sagebrush sites. After cutting, target tree species would be left laying where they were felled and allowed to slowly break down and decompose in place.

Under this alternative the mountain big sagebrush communities would remain in an advanced ecological stage with the exception of removing the target species of western juniper and ponderosa pine. Diversity of the mountain big sagebrush sites would continue to decline as brush species would continue to dominate the site at the expense of grass and forb species.

Cutting of western juniper and ponderosa pine in aspen and mountain mahogany sites would cause an increase in plant diversity over the next 20 to 30 years. Desirable grass and forb species would increase as they occupied the site following the actual cutting of target species. Aspen communities would move toward an uneven age class community allowing for the continued existence of the community into the future.

2. Alternative B - Burning Only

Fire would be reintroduced through prescribed burning to increase species and plant community structural diversity within the Birch Creek, Bluebucket Creek, Otis Creek, and Squaw Creek watersheds. Within these plant communities, species diversity is slowly being lost. There are only a limited number of years remaining when fire will be effective in reestablishing species and structural diversity without long recovery periods.

Reintroduction of fire would be limited in mature juniper stands due to the lack of fine fuels needed to sustain a fire, the severity of a burn required to carry through the tree crowns in the absence of fine fuels, and the long recovery time necessary following a burn of such a high intensity. No native western juniper sites that appear to have not burned historically will be considered for reintroduction of fire within the project area.

Under this alternative, a series of prescribed burns would occur on 4,800 acres over a 5 to 15-year period. The actual size of the individual burn units would be from 160 to 1,500 acres. The burns would occur in early fall on areas that were rested from livestock grazing for one grazing period prior to the actual burn.

Between 75 to 95 percent of the trees less than 10 feet in height would be killed. Between 50 to 80 percent of the trees greater than 10 feet in height would be killed.

Some of the proposed burn areas have natural (topography and sparse vegetation) or preexisting humanmade road barriers, which would require minimum fire control. Other areas may require control lines to be established prior to burning the individual units. In areas that require control lines to be established, techniques such as burning strips of vegetation or use of heavy machinery to remove vegetation to establish lines will be used. In the event that the prescribed burn escapes the targeted area within sage grouse habitat or ponderosa pine stands, immediate suppression action will be taken. Burns that escape into juniper dominated plant communities may be permitted to burn to the nearest road or other control barrier. All sites would be rested from livestock grazing preceding the burn to facilitate fine fuel growth. The proposed fire reintroduction areas would also require two growing seasons of rest from livestock grazing following burning. Private land may be burned in conjunction with public land through a cooperative agreement.

3. Alternative C - No Action Alternative

Under this alternative, no action would be taken. The existing plant communities would be permitted to evolve under current management direction.

III. DESCRIPTION OF THE AFFECTED ENVIRONMENT

A detailed description of the public land within the Three Rivers Resource Area can be found in the Three Rivers RMP/EIS (1992).

IV. ENVIRONMENTAL CONSEQUENCES

The project area contains no prime or unique farmlands, flood plains, hazardous waste sites, special management areas and no minerals will be affected by the project. Air quality will be affected in the short term from smoke created as vegetation is consumed in prescribed fire locations. There are no known infestations of noxious weeds or other invasive or non native weed species within the project area. No known minority or low income populations will be affected by the action of prescribed burning and/or cutting.

A. Proposed Action - Burning and Cutting

1. Anticipated Impacts

a. Vegetation and Watershed

The reintroduction of fire would create a mosaic of plant communities in different seral stages across the landscape. Burning would increase the efficiency of the ecosystem to use available water and soil nutrients. Burning would also result in a complex of sagebrush-grass-forb communities, ponderosa pine and juniper-dominated communities and earlier successional communities dominated by various grasses, forbs, and young shrubs. These communities would be associated in a mixed, mosaic pattern of diverse vegetation.

Burning would break up large areas of highly volatile fuels, reducing the potential for future large fires within the project area.

Mechanical removal of western juniper and ponderosa pine trees using chain saws would also increase the plant diversity of the area. When fire is determined to <u>not</u> be the most effective means of achieving the goal of western juniper and ponderosa pine removal, mechanical means will be used. This means of removal would only target the tree component of the vegetative community resulting in the removal of only the target species, all other plant species would be less effected than with burning. The end result would be a plant community which would undergo a minor change in structure as only the target species would be removed. Cutting would protect aspen, mountain mahogany, and mountain big sagebrush communities from a potentially destructive fire.

A combination of burning and cutting would improve the quantity and quality of grasses and forbs and special habitats such as aspen and mountain mahogany, which would increase ground cover and reduce soil erosion potentials over time.

The increase in herbaceous and ultimately shrub plant cover and change in community structure would improve the overall watershed conditions. The increased vegetation cover would decrease raindrop impact on the soil surface and, thereby, decrease overland flow of water. The increase in fibrous root system plants (grasses and forbs), as well as various depths of taprooted shrubs, would increase infiltration of water into the soil and more efficiently use the rainwater and snowmelt on site. All of these factors decrease overland flow of water which would decrease soil erosion and sediment yields into the Birch Creek, Bluebucket Creek, Otis Creek, and Squaw Creek watersheds. This stability of the watershed would provide for a more consistent water flow within these creeks. However, following a burn, prior to the first growing season, some accelerated erosion could occur if high-intensity storms develop.

Noxious weeds may have an opportunity to establish in burned areas following actual burning. Currently, there are no known noxious weed sites in the project area and therefore the probability of an invasion is minimal.

b. Wildlife

Impacts on wildlife following cutting would be minimal across the landscape. However, wildlife that are dependent on aspen and mountain mahogany communities may derive some long-term benefits from the removal of western juniper and ponderosa pine.

There would be a positive effect on some small mammals and birds from the addition of structure created by the felled trees which would create microhabitats.

Prescribed burning and cutting would reduce dense, woody cover and result in an increase in forbs used by antelope.

Most of the benefits to mule deer would be during the spring with an increase in forbs on burned areas. Adequate topography and unburned and uncut woody cover would be left for mule deer escape and thermal cover. Browse for mule deer will be initially removed from the burned areas. Antelope bitterbrush is expected to become a lesser component of the vegetative community into the foreseeable future following burning. Mountain big sagebrush which is used for cover will reestablish to preburn conditions in about 20 to 25 years. An increase in grass in both burned and cut areas would favor elk with most of the benefits to elk in the upper elevation portions of the project area. Adequate unburned and uncut cover would be left for elk.

Some sagebrush-dependent species such as sage thrasher and sage sparrow would be displaced until the sagebrush habitat is once again suitable for nesting (5 to10 years). Birds nesting in cavities in western juniper would be little affected by burning. Large trees usually are not killed by prescribed burning and these are the ones suitable for cavity nesters. Most of the trees that would be killed by fire are small and do not contain cavities.

There would be no known effects on bald eagles, American peregrine falcon or Canada lynx from burning or cutting.

Sage grouse brood-rearing or nesting habitat is known to be included in the proposed burn areas. With a reduction of western juniper and an increase in forbs, these areas would become more suitable for brood-rearing when sufficient sagebrush becomes reestablished (7 to10 years). The area may also be used for nesting as sagebrush becomes taller and more dense (15 to 25 years). A long-term benefit will be realized from the diversity of sagebrush community age classes created across the landscape offering a variety of habitat types suitable for sage grouse. Mourning dove often feed heavily in burned areas the first 5 years following fire.

c. Fish

There is expected to be no effect on fish resulting from cutting of western juniper and ponderosa pine. The minimum amount of ground disturbance associated with a cutting project coupled with the distance cutting sites would be located away from perennial creeks make any short and long-term impacts minimal to nonexistent.

Some of the project area is located on the uplands within the Bluebucket Creek watershed. Actual burning or cutting units would be one-half mile or more from the creek and would have no effect on fish. Sufficient vegetation between the actual burned and cut areas and the creek will remain to filter out and trap any overland movement of sediment following the burn. The project is expected to have no effect on fish.

d. Threatened & Endangered (T&E) Plant Species

Prior to treatment on the landscape, T&E plant species surveys will be conducted for those units scheduled to be burned. There are no known benefits or negative impacts to T&E species in the project area.

e. Visual and Recreational Resources

Short-term impacts to visual resources would occur in the cutting areas where trees are felled. No long-term impacts are anticipated to the recreation or visual resources from the proposed cuttings.

Short-term impacts to visual resources would occur in the burned areas. No long-term impacts are anticipated to the recreation or visual resources from the proposed burns. Hunting opportunities and visual resources would benefit due to increased diversity of plants and animals and the mosaic created from the burn patterns.

During actual burning activities, several smoke columns will be visible to the casual observer. The smoke will dissipate quickly as the column gains altitude and is directed away from the site and is dispersed by the prevailing winds. Following actual burning, some smoke may linger for several days as heavier fuels are consumed.

f. Cultural

Cutting of western juniper and small ponderosa pine trees would have no impact on archaeological values within the area.

Low to medium intensity prescribed burning could have impacts to burnable and rock art sites within the area. These site types will be inventoried prior to project implementation. Impacts to National Register eligible sites of this type would be mitigated through avoidance.

Mechanical control line construction could result in impacts to archeological sites. These lines will be inventoried for cultural resources prior to project implementation. National eligible sites will be inventoried prior to project implementation.

If a previously undetected flammable cultural resource site is identified during project implementation, it is expected that efforts will be made to alter the project will be altered to avoid the resource.

g. Cumulative Impacts

No cumulative impacts have been identified with this alternative.

B. Alternative A - Cutting Only

1. Anticipated Impacts

a. Vegetation and Watershed

The amount of western juniper and ponderosa pine which have become established within the project area would be reduced by cutting. Large areas of highly volatile fuels would remain across the project area carrying with it the potential for large fires into the future. Aspen, mountain mahogany, and mountain big sagebrush communities would benefit from the removal of western juniper and ponderosa pine trees which extract water and soil nutrients from the sites.

An increase in available water and soil nutrients would benefit the remaining desirable tree and shrub species. However, the majority of herbaceous vegetation would remain at a reduced level of vigor and density.

The watersheds, in the project area, as a whole, would not realize a substantial increase in benefits from cutting of target species. Some additional water would be available to plant communities within the cutting areas. This additional water would remain on the site and would not affect the watershed as a whole.

Some small western juniper and ponderosa pine trees would be missed by the cutters under this alternative. A follow-up treatment would be necessary several years following the initial treatment of the area. Fewer acres would be treated under this alternative than would be under the burning and cutting alternative.

b. Wildlife

Impacts on wildlife following cutting would be minimal across the landscape. However, wildlife that are dependant on aspen and mountain mahogany communities would derive some long-term benefits from the removal of western juniper and ponderosa pine.

There would be a positive effect on some small mammals and birds from the addition of structure created by the felled trees which would create microhabitats.

Cutting would have a positive affect on sage grouse habitat as it will help maintain the current habitat. This positive affect would gradually be reduced as the community progresses to a brush-dominated site with very little understory present for sage grouse to use into the future.

There would be no effect on bald eagles, American peregrine falcon or Canada lynx.

c. Fish

There will be no effect on fish resulting from cutting of western juniper and ponderosa pine. The minimum amount of ground disturbance associated with a cutting project coupled with the distance cutting sites would be located away from creeks would make any short and long-term impacts minimal to nonexistent or nonmeasurable.

d. T&E Plant Species

Prior to treatment on the landscape, T&E plant species surveys will be conducted for those units scheduled to be burned. There are no known benefits or negative impacts to T&E species in the project area.

e. Visual and Recreational Resources

Short-term impacts to visual resources would occur in the cutting areas where trees are felled and left to break down and decompose naturally. No long-term impacts are anticipated to the recreation or visual resources from the proposed cuttings.

f. Cultural

Cutting western juniper and small ponderosa pine trees would have no impacts to archaeological values within the area.

g. Cumulative Impacts

No cumulative impacts have been identified with this alternative.

C. Alternative B - Burning Only

1. Anticipated Impacts

a. Vegetation and Watershed

The reintroduction of fire would result in a mosaic of seral stages of diverse plant communities across the project area. A decrease in ponderosa pine, western juniper, and mountain big sagebrush within plant communities identified for burning would provide for more efficient water transfer and improve nutrient cycling within the ecosystem. Because mountain mahogany and antelope bitterbrush plant communities would be avoided where possible, a direct benefit of burning would be an increase in the diversity of shrubs and herbaceous plants on upland sites more closely approximating natural conditions. Benefits may be reduced over time in the mountain mahogany and antelope bitterbrush stands which remain untreated allowing for western juniper invasion to continue.

Burning would break up large areas of highly volatile fuels, reducing the potential for future large fires within the project area.

The increase in plant cover and change in community structure would improve the watershed conditions. The increased vegetation cover would decrease raindrop impact on the soil surface and, thereby, decrease overland flow of water. The increase in fibrous root system plants (grasses and forbs), as well as various depths of taprooted shrubs, would increase infiltration of water into the soil and more efficiently use the rainwater and snowmelt on site. All of these factors decrease overland flow of water which would decrease soil erosion and sediment yields in the Birch Creek, Bluebucket Creek, Otis Creek, and Squaw Creek watersheds. This stability of the watershed would provide for a more consistent water flow within these creeks. However, following the burn, prior to the first growing season, some erosion could occur if high-intensity storms develop.

Some plant communities such as aspen and mountain mahogany would continue to decline if fire was unable to kill competing vegetation. This would occur in plant communities where fuels were insufficient to support a fire that would carry through them.

Noxious weeds may have an opportunity to establish in burned areas following actual burning. Currently, there are no known noxious weed sites in the project area and therefore the probability of an invasion is minimal.

b. Wildlife

Prescribed burning would reduce dense, woody cover and result in an increase in forbs used by antelope.

Most of the benefits to deer would be during the spring with an increase in forbs. Adequate topography and unburned woody cover would be left for mule deer escape and thermal cover. An increase in grass would favor elk with most of the benefits to elk in the upper portions of the area. Adequate unburned cover would be left for elk cover.

Some sagebrush-dependent species such as sage thrasher and sage sparrow would be displaced until the sagebrush habitat is once again suitable for nesting (5 to10 years). Browse for mule deer forage would be reduced and shrub cover used for fawning would be removed until mountain big sagebrush regains suitable density and height (6 to 20 years). Birds nesting in cavities in western juniper would be little affected by burning. Large trees usually are not killed by prescribed burning and these are the ones suitable for cavity nesters. Most of the trees that would be killed by fire are small and do not contain cavities.

There would be no known effects on bald eagles, American peregrine falcon or Canada lynx.

Sage grouse brood-rearing or nesting habitat is known to be included in the proposed burn areas. With a reduction of western juniper and an increase in forbs, these areas would become more suitable for brood-rearing when sufficient sagebrush becomes reestablished (7 to10 years). The area may also be used for nesting as sagebrush becomes taller and more dense (15 to 25 years). A long-term benefit will be realized from the diversity of sagebrush community age classes created across the landscape offering a variety of habitat types suitable for sage grouse. Mourning dove often feed heavily in burned areas the first 5 years following fire.

c. Fish

Bluebucket Creek has rainbow trout present within it, and is a tributary to the Middle Fork of the Malheur River. The Malheur River supports bull trout, a Federally listed T&E fish species, during the winter months. Some of the project area is located on the uplands within the Bluebucket Creek watershed. The actual burning units would be no closer than one-half mile from the creek and would have no effect on the fish. Sufficient vegetation between the actual burned area and the creek will remain to filter out and trap any overland movement of sediment following the burn. The project is expected to have no effect on the fish.

d. T&E Plant Species

Prior to treatment on the landscape, T&E plant species surveys will be conducted for those units scheduled to be burned.

e. Visual and Recreational Resources

Immediately following burning, some recreationists may view the burned areas as unsightly. Short-term impacts are anticipated to the recreation and visual resources from the proposed burns. No long-term impacts are anticipated to the recreation or visual resources from the proposed burns. Hunting opportunities and visual resources would benefit due to increased diversity of plants and animals and the mosaic created from the burn patterns.

During the actual burning activities, several smoke columns will be visible to the casual observer. The smoke will dissipate quickly as the column gains altitude and is directed away from the site and is dispersed by the prevailing winds. After the burn is completed, some smoke may linger for several days as heavier fuels are consumed.

f. Cultural

Low to medium intensity prescribed burning could have impacts to burnable historic and rock art sites within the area. These site types will be inventoried prior to project implementation. Impacts to National Register eligible sites of this type would be mitigated through avoidance.

Mechanical control line construction could result in impacts to archaeological sites. Such control lines will be inventoried prior to project implementation. National Register eligible sites will be inventoried prior to project implementation.

If a previously undetected flammable cultural resource site is identified during project implementation, it is expected that efforts will be made to alter the project to avoid the resource.

g. Cumulative Impacts

No cumulative impacts have been identified with this alternative.

D. Alternative C - No Action

Taking no action would result in the continued encroachment of ponderosa pine and western juniper into other adjacent plant communities. Conditions within the area would continue to deteriorate over time resulting in the associated loss of diversity throughout the watersheds. Diversity within the plant communities within the project area would slowly be lost as tree densities increased at the expense of shrubs, grasses, and forbs.

Over time, additional sage grouse habitat would be lost. Aspen clones could be permanently lost and some mountain mahogany stands could become permanently lost.

V. CONSULTATION AND COORDINATION

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Finding of No Significant Impact
for
Otis Mountain Ecosystem Restoration Project
EA OR-025-99-50

Based on the analysis of potential environmental impacts contained in the Environmental Assessment (EA) and all other available information, I have determined that the proposal and alternatives analyzed do not constitute a major Federal action that would adversely impact the quality of the human environment. Therefore, an Environmental Impact Statement (EIS) is unnecessary and will not be prepared. This determination is based on the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts discussed in the EA have been disclosed. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests, or the locality. The physical and biological effects are limited to the Burns District, Three Rivers Resource Area and adjacent land.

2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.

3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplains, areas with unique characteristics, ecologically critical areas or designated Areas of Critical Environmental Concern. There would be no adverse impacts from invasive, nonnative species.

4. There are no highly controversial effects on the environment.

5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.

6. This alternative does not set a precedent for other projects that may be implemented in the future to meet the goals and objectives of adopted Federal, State, or local natural resource-related plans, policies or programs.

7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.

8. Based on previous and ongoing cultural resource surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice policy.

9. No adverse impacts to any threatened or endangered species or their habitat, that was determined to be critical under the Endangered Species Act, were identified.

10. This proposed action is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

_____ _____

Craig M. Hansen Date
Three Rivers Resource Area Field Manager